

REMARKS:

In accordance with the foregoing, claims 1-58 are pending and under consideration and claim 1 has been amended as set forth above. No new matter is included in this amendment.

Allowable Subject Matter:

At page 4 of the Office Action, the Examiner indicates that claims 13-34 and 46-58 are allowed. At page 5 of the Office Action, the Examiner indicates that claims 3-12 and 37-45 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

The Rejection:

At page 2 of the Office Action, claims 1, 2, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,212,582 to Nelson. This rejection is respectfully traversed. Claim 1 recites a micromirror having at least one groove. The Examiner asserts that Nelson discloses a micromirror having at least one groove, referring particularly to "a flexible hinge shown in figure 2." Further, the Examiner asserts that Nelson discloses an elastic body (12) which supports the micromirror in rotation, referring to col. 2, lines 30-39. As clearly indicated at col. 2, lines 30-39, reference 12 is designated a "body" of the device 10 and not an "elastic body" as cited by the Examiner. While it does appear that Nelson discloses that the mirror element 16 is supported by hinge members 20 and 30 as shown in FIG. 2, Applicants have found no member shown in FIG. 2 which would be properly described as a groove.

Claim 1 has been amended to recite a structural relationship between the at least one groove and the at least one electrode in order to more clearly point out the invention.

Regarding claim 2, the Examiner asserts that Nelson discloses at least one groove (30) near a rotation axis of the micromirror, referring particularly to col. 4, lines 23-36. At lines 24 and 25, reference 30 is clearly described as a hinge element and not as a groove.

In view of the above instances of incorrect references to portions of Nelson, it is respectfully requested that the Examiner review the reference and determine what was intended to be cited as the anticipatory features of Nelson relative to the groove and the elastic body as recited in claim 1, as amended.

Regarding claim 35 the Examiner asserts that Nelson discloses "controlling a resonant frequency of the micromirror by varying a waveform of the driving voltage of the at least one

electrode," referring particularly to col. 4, lines 61-68. Col. 4, lines 61-68 read as follows:

"Applying an alternating current between electrodes 34 and 36 can control the periodic rotation of the mirror element 16 about its axis of rotation 24. The signals applied to electrodes 34 and 36, in the preferred embodiment are 180° out of phase with each other and have a frequency equal to the resonant frequency of mirror element 16."

Controlling a periodic rotation of the mirror element is clearly different from controlling a resonant frequency of the mirror as claimed in claim 35. As recited in claim 35, the resonant frequency is controlled. As described in Nelson, the signals are applied at the resonant frequency and not to control the resonant frequency.

Claim 36 is deemed to be patentable at least for similar reasons set forth above regarding claim 35.

Summary:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 1/7/04

By: John H. Stowe
John H. Stowe
Registration No. 32,863

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501